WHAT IS CLAIMED IS:

1. A precise positioning actuator to be fixed with a head slider with at least one head element and with a support, for precisely positioning said at least one head element, comprising:

a pair of movable arms capable of displacing in response to a drive signal applied to said actuator, for catching said head slider in a space between said movable arms.

2. The actuator as claimed in claim 1, wherein said actuator further comprises a base fixed to said support, said movable arms extending from said base.

3. The actuator as claimed in claim 2, wherein said movable arms have at their top end sections slider fixing sections to be fixed to side surfaces of said head slider, respectively.

4. The actuator as claimed in claim 3, wherein said actuator has a shape so that there exists air gaps between said movable arms and side surfaces of said head slider except for said slider fixing sections, respectively.

5. The actuator as claimed in claim 2, wherein said base is made of an elastic sintered ceramic.

6. The actuator as claimed in claim 5, wherein said elastic

sintered ceramic is ZrO_2.

7. The actuator as claimed in claim 2, wherein each of said movable arms comprises an arm member made of an elastic sintered ceramic, and a piezoelectric element formed on a side surface of said arm member.

8. The actuator as claimed in claim 7, wherein said elastic sintered ceramic is ZrO_2.

9. The actuator as claimed in claim 2, wherein said movable arms is constituted so that said head slider is linearly and laterally oscillated in response to the drive signal.

10. The actuator as claimed in claim 2, wherein inner corners at coupling sections of said base and said movable arms have an obtuse angle plane shape.

11. The actuator as claimed in claim 2, wherein inner corners at coupling sections of said base and said movable arms have a smooth plane shape.

12. The actuator as claimed in claim 1, wherein said actuator has a rough U-plane shape.

13. The actuator as claimed in claim 1, wherein said actuator has a thickness equal to or less than a thickness of a head slider to be caught.

14. The actuator as claimed in claim 1, wherein a spacing between said pair of movable arms is determined to a value slightly shorter than a width of said head slider to be caught.

15. The actuator as claimed in claim 1, wherein said at least one head element is at least one thin-film magnetic head element.

16. A head gimbal assembly including a head slider with at least one head element, a support and a precise positioning actuator fixed with said head slider and with said support for precisely positioning said at least one head element, said actuator comprising a pair of movable arms capable of displacing in response to a drive signal applied thereto, said head slider is caught in a space between said movable arms.

17. The head gimbal assembly as claimed in claim 16, wherein said actuator further comprises a base fixed to said support, said movable arms extending from said base.

18. The head gimbal assembly as claimed in claim 17, wherein said movable arms have at their top end sections slider fixing sections

fixed to side surfaces of said head slider, respectively.

19. The head gimbal assembly as claimed in claim 18, wherein said actuator has a shape so that there exists air gaps between said movable arms and side surfaces of said head slider except for said slider fixing sections, respectively.

20. The head gimbal assembly as claimed in claim 17, wherein said base is made of an elastic sintered ceramic.

21. The head gimbal assembly as claimed in claim 20, wherein said elastic sintered ceramic is ZrO_2.

22. The head gimbal assembly as claimed in claim 17, wherein each of said movable arms comprises an arm member made of an elastic sintered ceramic, and a piezoelectric element formed on a side surface of said arm member.

23. The head gimbal assembly as claimed in claim 22, wherein said elastic sintered ceramic is ZrO_2.

24. The head gimbal assembly as claimed in claim 17, wherein said movable arms is constituted so that said head slider is linearly and laterally oscillated in response to the drive signal.

25. The head gimbal assembly as claimed in claim 17, wherein inner corners at coupling sections of said base and said movable arms have an obtuse angle plane shape.

26. The head gimbal assembly as claimed in claim 17, wherein inner corners at coupling sections of said base and said movable arms have a smooth plane shape.

27. The head gimbal assembly as claimed in claim 16, wherein said actuator has a rough U-plane shape.

28. The head gimbal assembly as claimed in claim 16, wherein said actuator has a thickness equal to or less than a thickness of said head slider.

29. The head gimbal assembly as claimed in claim 16, wherein a spacing between said pair of movable arms is determined to a value slightly shorter than a width of said head slider.

30. The head gimbal assembly as claimed in claim 16, wherein said at least one head element is at least one thin-film magnetic head element.

31. The head gimbal assembly as claimed in claim 16, wherein said movable arms of said actuator and said head slider are fixed with an

adhesive.

32. The head gimbal assembly as claimed in claim 16, wherein said actuator and said support are fixed with an adhesive and a solder.

33. A disk drive apparatus having at least one head gimbal assembly that includes a head slider with at least one head element, a support and a precise positioning actuator fixed with said head slider and with said support for precisely positioning said at least one head element, said actuator comprising a pair of movable arms capable of displacing in response to a drive signal applied thereto, said head slider is caught in a space between said movable arms.

34. A manufacturing method of a head gimbal assembly comprising the steps of:

preparing a precise positioning actuator with a pair of movable arms capable of displacing in response to a drive signal applied thereto;

catching a head slider with at least one head element in a space between said movable arms of said actuator; and

fixing said actuator with said caught head slider to said support.

35. The manufacturing method as claimed in claim 34, wherein said catching step comprises fixing said head slider between said movable

arms with an adhesive.

36. The manufacturing method as claimed in claim 35, wherein a spacing between said pair of movable arms is slightly shorter than a width of said head slider to be caught, and wherein said catching step comprises provisionally fixing said head slider between said movable arms by a pinching force of said movable arms.

37. The manufacturing method as claimed in claim 36, wherein said catching step comprises securely fixing said head slider to said movable arms by thermally curing the adhesive after the provisional fixing.

38. The manufacturing method as claimed in claim 34, wherein said fixing step comprises fixing said actuator to said support with an adhesive or a solder